

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Serial No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
PO038631	MEC002-VU	6	1	Net 30	M7075T6S4.000X3.000	7075-T6S Sheet 4.000" Thick X 3.000" Wide : MATERIAL: 7075-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/12 OR AMS-QQ-A-250/12 OR AMS 4045 OR ASTM B209 receive ft				24	1/8/2018	24		S029879	Stock	1/5/2018	\$ 82.35 / ft	3		\$1,976.40	Metaux Castle
		7			M7075T6S4.000X4.000	7075-T6 Sheet 4.000' X 4.000" cut to size: 32" LONG : MATERIAL: 7075-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/12 OR AMS-QQ-A-250/12 OR AMS 4045 OR ASTM B209 receive ft				27		27		S029880	Stock	1/5/2018	\$ 94.50 / ft	3		\$2,520.32	Metaux Castle
Total:										51		51								\$4,496.72	

Plex 1/8/2018 9:09 AM Dart.Plouffe.Sonia

Status: Receiving  
 Part: **M7075T6S4.000X4**  
 Created: 1/8/18 9:07 AM DART.PLOUFFE.SON  
  
 Serial No: **S029880**

Status: Receiving  
 Part: **M7075T6S4.000X3**  
 Created: 1/8/18 9:07 AM DART.PLOUFFE.SON  
  
 Serial No: **S029879**

# INTERORG TRANSFER PACKING SLIP/ CERTIFICATE OF CONFORMANCE

Page 1 of 2

Shipment No:3468241

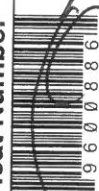
<b>Ship From:</b> A. M. CASTLE & CO. 14001 ORANGE AVENUE PARAMOUNT, CA 90723 USA		<b>Sold To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		<b>Ship To:</b> A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		<b>Deliver To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
<b>Date Shipped</b> 21-DEC-17		<b>F.O.B.</b> ORIGIN		<b>Freight Terms</b> Prepaid		<b>Carrier</b> YRC	
						<b>BOL No</b> 3468241-2	

<b>Shipment Details</b>		<b>Final Destination Branch - TOR</b>	
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<b>Order No</b> 4984539	<b>Line No</b> 1	<b>Item No</b> 752190.MO	<b>Description</b> 4.0000.PL.7075.T651.ALUMINUM.USI.48.5000.144.5000 CUT RECTANGLE TO 48.5 IN ( + .1250/- .0000 IN) X 3 IN ( + .1250/- .0000 IN) - ALUMINUM PLATE SAW SPECIFICATIONS: AMS-QQ-A-250/12
<b>Purchase Order No</b> 38631	<b>Part Number</b>	<b>Ordered Qty</b> 6.00 PCS	<b>Invoice Qty</b> 6.00 PCS

**Details**  
ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY  
ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S  
Email P/s and certs to: clavoie@artaero.com  
END USER: DART AEROSPACE  
END USE: COMMERCIAL AIRCRAFT PARTS

8818-01-8

<b>Delivery No.</b> 121501802	<b>Mill/Source</b> CONSTELLUM ROLLED PRODUCTS	<b>Heat Number</b>  9 6 0 0 8 8 6 1	<b>Mech Id</b>	<b>PCS</b> 6	<b>Width (IN)</b>	<b>Length (IN)</b>	<b>Shipped Qty(LBS)</b> 361.8623
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These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Date Printed: 21-DEC-2017 05:30:39 PM

INTERORG TRANSFER  
PACKING SLIP/  
CERTIFICATE OF CONFORMANCE

Reviewed by Authorized Castle Metals Representative:	Date:	Name:
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Page 2 of 2

*[Handwritten signature]*



*8298-01-8*



**Constellium**



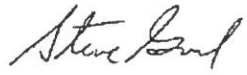
**CERTIFIED TEST REPORT**  
Constellium Rolled Products  
Ravenswood, LLC

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A M CASTLE & CO.  
14001 ORANGE AVE.  
PARAMOUNT CA  
90723  
US

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A M CASTLE  
1420 KENSINGTON ROAD, SUITE 220  
OAK BROOK IL  
60523  
US

A M CASTLE		110551463		4075		INCLUSION		Serial:20170707-0110551463		Pg 1of2	
CUSTOMER PURCHASE ORDER NO. & ITEM 424642						Constellium ORDER NO. 207814			<b>CERTIFICATION</b> "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC 859 Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA    Steve Good - Laboratory Manager		
ALLOY 7075	CLAD	TEMPER T651	GAUGE 4.00000 in 101.60 mm	WIDTH 48.50000 in 1,232 mm	LENGTH 144.50000 in 3,670 mm						
ITEM ORDERED SPEC PLATE, SAWED MILL. FINISH											
CUSTOMER SPECIFICATION AMS 4045K											
PART NUMBER 752190		B/L NUMBER 83547		DATE SHIPPED 07/10/2017							
WT. SHIPPED 8655.000 LB		NO. OF PIECES 000003		GOVT. CONTRACT NO.							

**ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS:**

ASTM B594 REV 13 2013 100% SONIC W/0.125"DEADZONE Class A  
 AMS QQ-A-250/12A  
 AMS STD-2154A 2012 TYPE1 CLASS A 100% SONIC MINUS DEADZONE  
 ASTM B209-14  
 BSS-7055B 2013 CLASS A 100% SONIC TESTED MINUS DEADZONE  
 CST1006 REV E 2011 CLASS A 100% SONIC MINUS DEADZONE  
 DPS 4.713 REV AK 2012 CLASS A 100% SONIC MINUS DEADZONE  
 GAMPS 9101 REV B 2006 CLASS A 100% SONIC MINUS DEADZONE  
 PS 21211P 2010 CLASS A 100% SONIC MINUS DEADZONE

**Load Details**

Package	Net Lbs	Kg	Lot	Piece	Serial	Parent Lot
1001559281	2,885.000	1,308.613	9600886	01		
1001559284	2,885.000	1,308.613	9600886	02		
1001559285	2,885.000	1,308.613	9600886	03		

**Lot: 9600886**

**Tensile - Room Temperature (US)**

Direction	Tests	Ultimate (KSI)		Yield (KSI)		Elongation (%)		Report
		Min	Max	Min	Max	Min	Max	
LT	02	70.6	70.7	56.2	56.4	12.0	12.0	

**Tensile - Room Temperature (SI)**

Direction	Tests	Ultimate (N/MM2)		Yield (N/MM2)		Elongation (%)		Report
		Min	Max	Min	Max	Min	Max	
LT	02	487	487	387	389	12.0	12.0	





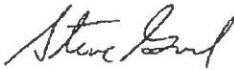
**CERTIFIED TEST REPORT**  
Constellium Rolled Products  
Ravenswood, LLC

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A M CASTLE & CO.  
14001 ORANGE AVE.  
PARAMOUNT CA  
90723  
US

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A M CASTLE  
1420 KENSINGTON ROAD, SUITE 220  
OAK BROOK IL  
60523  
US

A M CASTLE		110551463		4075		INCLUSION		Serial:20170707-0110551463		Pg 2of2				
CUSTOMER PURCHASE ORDER NO. & ITEM 424642						Constellium ORDER NO. 207814								
ALLOY 7075		CLAD		TEMPER T651		GAUGE 4.00000 in 101.60 mm		WIDTH 48.50000 in 1,232 mm		LENGTH 144.50000 in 3,670 mm				
ITEM ORDERED SPEC PLATE, SAWED MILL FINISH						<b>CERTIFICATION</b> "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC 859 Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA    Steve Good - Laboratory Manager								
CUSTOMER SPECIFICATION AMS 4045K														
PART NUMBER 752190			B/L NUMBER 83547									DATE SHIPPED 07/10/2017		
WT. SHIPPED 8655.000 LB			NO. OF PIECES 000003									GOVT. CONTRACT NO.		
Chemistry (Actual)														
		SI	FE	CU	MN	MG	CR	ZN	TI	ZR				
Core		0.06	0.16	1.45	0.06	2.63	0.20	5.69	0.03	0.00				
OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER														
All material contained in this lot was cast and manufactured in the USA														
QUALITY TEXTS: AMC CA-15403E R 6														
THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. CHEMISTRY BY OES: ARKSPARK CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399 WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557 DUNS Number: 090570149; CAGE Code: 1YW19 Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product. "END OF CERTIFICATION"														
P-860-155D REVISED: 10 2014														

**INTERORG TRANSFER  
PACKING SLIP/  
CERTIFICATE OF CONFORMANCE**

Page 1 of 2

Shipment No:3468241


<b>Ship From:</b> A. M. CASTLE & CO. 14001 ORANGE AVENUE PARAMOUNT, CA 90723 USA		<b>Sold To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		<b>Ship To:</b> A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		<b>Deliver To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
<b>Date Shipped</b> 21-DEC-17	<b>F.O.B.</b> ORIGIN	<b>Freight Terms</b> Prepaid		<b>Carrier</b> YRC	<b>BOL No</b> 3468241-2		

**Shipment Details**

Order No	Line No	Item No	Description
4984539	2	752190.MO	4.0000.PL.7075.T651.ALUMINUM.USI.48.5000.144.5000 CUT RECTANGLE TO 4 IN ( + .1250/- .0000 IN) X 32 IN ( + .1250/- .0000 IN) - ALUMINUM PLATE SAW SPECIFICATIONS: AMS-QQ-A-250/12
<b>Purchase Order No</b> 38631	<b>Part Number</b>		<b>Ordered Qty</b> 10.00 PCS
			<b>Invoice Qty</b> 10.00 PCS

**Details**

ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY  
ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S  
Email P/s and certs to: clavoie@artaero.com  
END USER: DART AEROSPACE  
END USE: COMMERCIAL AIRCRAFT PARTS

Delivery No.	Mill/Source	Heat Number	Mech Id	PCS	Width (IN)	Length (IN)	Shipped Qty(LBS)
121501802	CONSTELLUM ROLLED PRODUCTS			10			530.5656

SP 12-01-8

These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Date Printed: 21-DEC-2017 05:30:39 PM

INTERORG TRANSFER  
PACKING SLIP/  
CERTIFICATE OF CONFORMANCE

Page 2 of 2

Reviewed by Authorized Castle Metals Representative:	Date:	Name:
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*g*



*Supervisor*



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

## PURCHASE ORDER PO038631

**Supplier:** MEC002-VU  
Metaux Castle  
P.O. Box 4090 Stn A  
Toronto  
ON  
M5W OE9 Canada

**PO No:** PO038631

**PO Date:** 12/12/17

**Due Date:** 1/8/18

**Purchase Order**

**Revision:**

**Revision Date:**

**Ship-To Contact:** Lavoie, Chantal  
clavoie@dartaero.com

**E-MAILED**  
DEC 13 2017

**Ship To:** 1270 Aberdeen Street  
Hawkesbury  
ON  
K6A 1K7 Canada  
Phone: 613-632-5200

**Via:** Ground

**Pymt Terms:** Net 30

**Freight Terms:**

**Special Comments:**

### Items

Line Item	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	M7075T6S1.250X2.000	7075-T6 Sheet 1.250" X 2.000" : MATERIAL: 7075-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/12 OR AMS-QQ-A-250/12 OR AMS 4045 OR ASTM B209 receive ft	Firmed	1/8/18	48 ft	0 ft	48 ft	\$20.12/ft	\$965.76
2	M7075T6S6.000X0.250	7075-T6S Sheet 6" Thick Plate X 0.25" Wide : MATERIAL: 7075-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/12 OR AMS-QQ-A-250/12 OR AMS 4045 OR ASTM B209 receive ft	Firmed	1/8/18	12 ft	0 ft	12 ft	\$20.75/ft	\$249.00
3	M7075T6S0.750X1.250	M7075T6S0.750X1.250 : MATERIAL: 7075-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/12 OR AMS-QQ-A-250/12 OR AMS 4045 OR ASTM B209 receive ft	Firmed	1/8/18	12 ft	0 ft	12 ft	\$16.45/ft	\$197.40
4	M7075T6S0.375X6.000	7075-T6S Sheet .375" Thick Plate X 6" Wide : MATERIAL: 7075-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/12 OR AMS-QQ-A-250/12 OR AMS 4045 OR ASTM B209 receive ft	Firmed	1/8/18	24 ft	0 ft	24 ft	\$25.68/ft	\$616.32



Items									
Line Item	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
5	M7075T6S1.750X2.250	7075-T6 Sheet 1.750" X 2.250" : MATERIAL: 7075-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/12 OR AMS-QQ-A-250/12 OR AMS 4045 OR ASTM B209 receive ft	Firmed	1/8/18	48 ft	0 ft	48 ft	\$28.62/ft	\$1,373.76
6	M7075T6S4.000X3.000	7075-T6S Sheet 4.000" Thick X 3.000" Wide : MATERIAL: 7075-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/12 OR AMS-QQ-A-250/12 OR AMS 4045 OR ASTM B209 receive ft	Firmed	1/8/18	24 ft	0 ft	24 ft	\$82.35/ft	\$1,976.40
<b>Line Item Note</b> cut in section of 4 ft									
7	M7075T6S4.000X4.000	7075-T6 Sheet 4.000' X 4.000" cut to size: 32" LONG : MATERIAL: 7075-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/12 OR AMS-QQ-A-250/12 OR AMS 4045 OR ASTM B209 receive ft	Firmed	1/8/18	26.667 ft	0 ft	27 ft	\$94.500236/ft	\$2,520.04
<b>Line Item Note</b> 10 pcs cut at 32" length									
<b>Grand Total:</b>								\$7,898.68	
<b>Order Notes</b>									
Procurement Quality Clauses A005 right of entry A012 chemical and physical test report A016 personnel qualification A017 raw material identification (as applicable) A026 certification of material conformance A041 quality management system A042 dart notification by supplier A043 retention of quality documents  A048 counterfeit parts avoidance, detection, mitigation and disposition program  A049 supplier awareness  Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit <a href="http://www.dartaerospace.com">www.dartaerospace.com</a> for further explanation.									

Plex 12/13/17 11:11 AM dart.lavoie.chantal

## Chantal Lavoie

---

**From:** Desbiens, Marc <mdesbien@amcastle.com>  
**Sent:** Wednesday, December 13, 2017 11:03 AM  
**To:** Chantal Lavoie  
**Subject:** RE: quote

Hi Chantal,

Sorry

7075-t6 bar 4" x 3" x 24 ft cut in section 4 ft \$ 82.35 Ft

Thanks

Marc Desbiens  
Inside sales representative  
Castle Metals, Montreal, QC  
Direct line 514-795-8176  
1-800-806-6660 ext 52226  
Fax # 1-855-892-6370  
*Customized Supply Chain Solutions for Your Metal Needs*

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**From:** Chantal Lavoie [mailto:clavoie@dartaero.com]  
**Sent:** Tuesday, December 12, 2017 2:06 PM  
**To:** Desbiens, Marc  
**Subject:** RE: quote

Hi Marc,  
For mat'l 7075-t6 plate 4 x 3 wow is it really 215.52 a ft.  
Thanks  
Chantal

**From:** Desbiens, Marc [mailto:mdesbien@amcastle.com]  
**Sent:** Monday, December 11, 2017 1:59 PM  
**To:** Chantal Lavoie <clavoie@dartaero.com>  
**Subject:** RE: quote

Hi Chantal,

price an delivery on mat'l.

7075-t6 bar 1.250" x 2" x 12 ft \$ 20.12 Ft  
70175-t6 bar 6" x 0.250" x 12 ft \$ 20.75 Ft  
7075-t6 bar 1.250" x 2" x 36 ft \$ 20.12 Ft  
7075-t6 bar 0.750" x 1.250" x 12 ft \$ 16.45 Ft

7075-t6 bar 0.375" x 6" x 24 ft \$ 25.68 Ft  
7075-t6 bar 4.5" x 5" x 12 ft cut in section 4 ft Regret, 4" max  
7075-t6 bar 1.750" x 2.250" x 24 ft \$ 28.62 Ft  
7075-t6 bar 4" x 3" x 24 ft cut in section 4 ft \$ 215.25 Ft  
7075-t6 bar 4" x 4" x 10 pcs cut At 32" \$ 252.00 piece

These would all be cut from plate

All 3 weeks

Thanks

Marc Desbiens  
Inside sales representative  
Castle Metals, Montreal, QC  
Direct line 514-795-8176  
1-800-806-6660 ext 52226  
Fax # 1-855-892-6370  
*Customized Supply Chain Solutions for Your Metal Needs*

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## Chantal Lavoie

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**From:** Desbiens, Marc <mdesbien@amcastle.com>  
**Sent:** Monday, December 11, 2017 1:59 PM  
**To:** Chantal Lavoie  
**Subject:** RE: quote

Hi Chantal,

price and delivery on mat'l.

7075-t6 bar 1.250" x 2" x 12 ft <sup>494</sup> \$ 20.12 Ft  
70175-t6 bar 6" x 0.250" x 12 ft \$ 20.75 Ft  
~~7075-t6 bar 1.250" x 2" x 36 ft \$ 20.12 Ft~~  
7075-t6 bar 0.750" x 1.250" x 12 ft \$ 16.45 Ft  
7075t6 bar 0.375" x 6" x 24 ft \$ 25.68 Ft  
7075-t6 bar 4.5" x 5" x 12 ft cut in section 4 ft Regret, 4" max  
7075-t6 bar 1.750" x 2.250" x 48 ft \$ 28.62 Ft  
7075-t6 bar 4" x 3" x 24 ft cut in section 4 ft \$ 215.25 Ft  
7075-t6 bar 4" x 4" x 10 pcs cut At 32" \$ 252.00 piece = 26.6664.

These would all be cut from plate

All 3 weeks

Thanks

Marc Desbiens  
Inside sales representative  
Castle Metals, Montreal, QC  
Direct line 514-795-8176  
1-800-806-6660 ext 52226  
Fax # 1-855-892-6370

***Customized Supply Chain Solutions for Your Metal Needs***

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**CERTIFIED TEST REPORT**  
Constellium Rolled Products  
Ravenswood, LLC

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A M CASTLE & CO.  
14001 ORANGE AVE.  
PARAMOUNT CA  
90723  
US

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A M CASTLE  
1420 KENSINGTON ROAD, SUITE 220  
OAK BROOK IL  
60523  
US

A M CASTLE		110551463		4075		INCLUSION		Serial:20170707-0110551463		Pg 1of2	
CUSTOMER PURCHASE ORDER NO. & ITEM 424642						Constellium ORDER NO. 207814					
ALLOY 7075		CLAD		TEMPER T651		GAUGE 4.00000 in 101.60 mm		WIDTH 48.50000 in 1,232 mm		LENGTH 144.50000 in 3,670 mm	
ITEM ORDERED SPEC PLATE, SAWED MILL. FINISH											
CUSTOMER SPECIFICATION AMS 4045K											
PART NUMBER 752190				B/L NUMBER 83547				DATE SHIPPED 07/10/2017			
WT. SHIPPED 8655.000 LB				NO. OF PIECES 000003				GOVT. CONTRACT NO.			
Steve Good - Laboratory Manager											

**CERTIFICATION**  
"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."  
Constellium Rolled Products Ravenswood, LLC  
859 Century Road  
P.O. BOX 68  
RAVENSWOOD, WV 26164 USA

*Steve Good*

**ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS:**

ASTM B594 REV 13 2013 100% SONIC W/ 0.125"DEADZONE Class A  
AMS QQ-A-250/12A  
AMS-STD-2154A 2012 TYPE1 CLASS A 100% SONIC MINUS DEADZONE  
ASTM B209-14  
BSS-7055B 2013 CLASS A 100% SONIC TESTED MINUS DEADZONE  
CST1008 REV E 2011 CLASS A 100% SONIC MINUS DEADZONE  
DPS 4.713 REV AK 2012 CLASS A 100% SONIC MINUS DEADZONE  
GAMPS 9101 REV B 2006 CLASS A 100% SONIC MINUS DEADZONE  
PS 21211P 2010 CLASS A 100% SONIC MINUS DEADZONE

**Load Details**

Package	Net Lbs	Kg	Lot	Piece	Serial	Parent Lot
1001559281	2,885.000	1,308.613	9600886	01		
1001559284	2,885.000	1,308.613	9600886	02		
1001559285	2,885.000	1,308.613	9600886	03		

**Lot: 9600886**

**Tensile - Room Temperature (US)**

Direction	Tests	Ultimate (KSI)		Yield (KSi)		Elongation (%)		Report
		Min	Max	Min	Max	Min	Max	
LT	02	70.6	70.7	56.2	56.4	12.0	12.0	

**Tensile - Room Temperature (SI)**

Direction	Tests	Ultimate (N/MM2)		Yield (N/MM2)		Elongation (%)		Report
		Min	Max	Min	Max	Min	Max	
LT	02	487	487	387	389	12.0	12.0	





**Constellium**



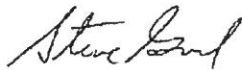
**CERTIFIED TEST REPORT**  
Constellium Rolled Products  
Ravenswood, LLC

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A M CASTLE & CO.  
14001 ORANGE AVE.  
PARAMOUNT CA  
90723  
US

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D  
  
T  
O

A M CASTLE  
1420 KENSINGTON ROAD, SUITE 220  
OAK BROOK IL  
60523  
US

A M CASTLE		110551463		4075		INCLUSION		Serial:20170707-0110551463		Pg 2of2																					
CUSTOMER PURCHASE ORDER NO. & ITEM 424642						Constellium ORDER NO. 207814		<b>CERTIFICATION</b> "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC 859 Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA    Steve Good - Laboratory Manager																							
ALLOY 7075	CLAD	TEMPER T651	GAUGE 4.00000 in 101.60 mm	WIDTH 48.50000 in 1,232 mm	LENGTH 144.50000 in 3,670 mm																										
ITEM ORDERED SPEC PLATE, SAWED MILL FINISH																															
CUSTOMER SPECIFICATION AMS 4045K																															
PART NUMBER 752190		B/L NUMBER 83547		DATE SHIPPED 07/10/2017																											
WT. SHIPPED 8655.000 LB		NO. OF PIECES 000003		GOVT. CONTRACT NO.																											
<b>Chemistry (Actual)</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>SI</th> <th>FE</th> <th>CU</th> <th>MN</th> <th>MG</th> <th>CR</th> <th>ZN</th> <th>TI</th> <th>ZR</th> </tr> </thead> <tbody> <tr> <td>Core</td> <td>0.06</td> <td>0.16</td> <td>1.45</td> <td>0.06</td> <td>2.63</td> <td>0.20</td> <td>5.69</td> <td>0.03</td> <td>0.00</td> </tr> </tbody> </table>													SI	FE	CU	MN	MG	CR	ZN	TI	ZR	Core	0.06	0.16	1.45	0.06	2.63	0.20	5.69	0.03	0.00
	SI	FE	CU	MN	MG	CR	ZN	TI	ZR																						
Core	0.06	0.16	1.45	0.06	2.63	0.20	5.69	0.03	0.00																						
OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER																															
All material contained in this lot was cast and manufactured in the USA																															
<b>QUALITY TEXTS:</b> AMC CA-15403E R 6																															
THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. CHEMISTRY BY OES: ARKSPARK CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399 WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557 DUNS Number: 090570149; CAGE Code: 1YW19 Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product. "END OF CERTIFICATION"																															
P-860-155D REVISED: 10 2014																															

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M70257654-000x3.000 PO / BATCH NO.: 038631/5029879  
 DATE: JAN 08 2019

MATERIAL CERT REC'D: yes  
 QUANTITY RECEIVED: 24"  
 QUANTITY INSPECTED: 24"  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 3.000  
 THICKNESS RECEIVED: 3.000  
 SHEET SIZE ORDERED: N/A  
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="radio"/> N	
CORRECT FINISH	<input checked="" type="radio"/> Y	N	
CORROSION	Y	<input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	N	AMS QQ-A-250
CORRECT THICKNESS	<input checked="" type="radio"/> Y	N	
PHOTO REQUIRED	Y	<input checked="" type="radio"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	N	Heat# 9600886
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="radio"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 11</u> DATE: <u>JAN 08 2019</u>	SIGNED OFF BY: _____ DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 7075-T6/T62/T651 ALUMINUM SHEET OR PLATE

SPECIFICATION: QQ-A-250/12 OR AMS-QQ-A-250/12  
OR AMS 4045  
OR ASTM B209

OR

PURCHASE MATERIAL: 7075-T6/T62/T651 ALCLAD ALUMINUM SHEET OR PLATE

SPECIFICATION: QQ-A-250/13 OR AMS-QQ-A-250/13  
OR AMS 4046 / 4049  
OR ASTM B209

PART NUMBER:

M7075T6S | TTT | X | W.WWW |  
| THK | | WIDTH |

WHERE: ".TTT" = THICKNESS (IN INCHES)

AND "W.WWW" = WIDTH (IN INCHES, OPTIONAL, FOR SPECIFYING CUT PLATE)

EG. 0.063" THICK SHEET = M7075T6S.063  
EG. 3.5" WIDE BY 0.500" THICK PLATE = M7075T6S.500X3.500

PREFERRED SIZE:

.TTT BY 4FT BY 10FT FOR SHEET

RELEASED

2017 JUN 19  
ECN 17-574

APPROVED

B		ADD. REF. TO PLATE: "T651" TEMPER, AMS 4046.	CP	17.05.05
A		OPTIONAL WIDTH DIM (CAR 16-149)	RF	10.11.08
REV.		NEW ISSUE	BY	DATE
DESIGN	RF	DESCRIPTION		
DRAWN	CP	DRAWING NO.		REV. B
CHECKED	ML	HAWKESBURY, ONTARIO, CANADA		
MFG. APPR.	LL	M7075T6S		SHEET 1 OF 1
APPROVED	WM	TITLE		SCALE
DE APPR.	D9-1	7075-T6 SHEET/PLATE SPEC		NTS
DATE	17.05.05	COPYRIGHT © 2015 BY DART AEROSPACE LTD. ALL RIGHTS RESERVED. NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING FROM DART AEROSPACE LTD.		



# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M7025+654.000x4.000

PO / BATCH NO.: 038631/5029880

DATE: JAN 08 2018

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 27'  
 QUANTITY INSPECTED: 27'  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 4.000  
 THICKNESS RECEIVED: 4.000  
 SHEET SIZE ORDERED: N/A  
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	(Y) N	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	(Y) N	
CORRECT MATERIAL PER M-DRAWING	(Y) N	AMS QQ-A-250
CORRECT THICKNESS	(Y) N	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	(Y) N	Heat # 9600886
CORRECT MATERIAL IDENTIFICATION	(Y) N	
CORRECT M# ON THE MATERIAL	(Y) N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

*testers located in the Quality Office*

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 11</u> DATE: <u>9-80 JAN 08 2018</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# SPECIFICATION CONTROL DRAWING

△B PURCHASE MATERIAL: 7075-T6/T62/T651 ALUMINUM SHEET OR PLATE

SPECIFICATION: QQ-A-250/12 OR AMS-QQ-A-250/12  
OR AMS 4045  
OR ASTM B209

OR

△B PURCHASE MATERIAL: 7075-T6/T62/T651 ALCLAD ALUMINUM SHEET OR PLATE

SPECIFICATION: QQ-A-250/13 OR AMS-QQ-A-250/13  
OR AMS 4048 / 4049  
OR ASTM B209

△B PART NUMBER: M7075T6S | TTT | X | W.WWW | THK | WIDTH

△B WHERE "TTT" = THICKNESS (IN INCHES)  
AND "W.WWW" = WIDTH (IN INCHES, OPTIONAL, FOR SPECIFYING CUT PLATE)

EG. 0.063" THICK SHEET = M7075T6S.063  
EG. 3.5" WIDE BY 0.500" THICK PLATE = M7075T6S.500X3.500

△B PREFERRED SIZE: TTT BY 4FT BY 10FT FOR SHEET

RELEASED

2017 JUN 19  
ECN 17-574

B	ADD. REF TO PLATE: T651* TEMPER, AMS 4048, OPTIONAL WIDTH DIM (CAR16-149)	CP	17.05.05
A	NEW ISSUE	RF	10.11.08
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	CP	
DRAWN	CP		
CHECKED	ML		
MFG. APPR.	LL		
APPROVED	WM		
DE APPR.	DS		
DATE	17.05.05		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. M7075T6S			
REV. B			
SHEET 1 OF 1			
TITLE 7075-T6 SHEET/PLATE SPEC			
SCALE NTS			
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APPROVED